



Examining new geographies of coal: Dissenting energyscapes in Colombia and Turkey



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HIGHLIGHTS

- Energy injustices underlie the new geographies of coal in South-South axis.
- Energyscapes provide a frame to explore connectivity in socio-political landscapes of coal.
- We analyze multiscalar spatial, material and discursive sides of Colombia-Turkey coal chain.
- Connected energyscapes opens possibilities for a shift towards transnational energy democracy.
- In-depth studies on networked social movements could inform democratic energy decisions.

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ABSTRACT

Global energy geographies are changing, call it by will or by market forces. As coal production declines or consumption is phased out in parts of the Global North, the future of coal will likely be decided in the Global South. In this article, we explore energyscapes, as multiple and nested sites of connectivity over energy, and their relation to energy justice, environmental conflicts and social movements in new geographies of coal. By putting into question the reproduction of multiple levels of socio-environmental injustices related to coal's extraction and consumption, we trace the emerging South-South coal links with an empirical focus on Colombia and Turkey. Coal extraction and consumption, respectively, in these geographically distant but increasingly connected countries are linked by multiscalar socio-ecological interactions and conflicts. After exploring these interactions, we examine the changing energyscapes of coal operating on different layers (the market, the physical, and the socio-environmental damages) between the two countries. Our analysis reveals that these new geographies are anchored in cross-scalar environmental injustices and democratic deficits, only sustained with top-down measures and emerging bilateral dependencies. The coming challenge for energy justice, therefore, is to link local communities' claims and democratization of energyscapes between the supply and the demand sides.

1. Introduction

Despite a global trend of declining carbon intensity driven by economic restructuring and the rising share of non-hydrocarbon energy, the world still faces a bumpy ride in terms of undertaking rapid decarbonization required to stay within 'well below 2 °C' target of Paris Agreement while also ensuring access to affordable, reliable, sustainable and modern energy for all in line with UN SDG 7 [1]. This is a challenge that requires a breakneck speed transformation to widespread low-to-zero carbon energy, as well as a reduced global energy demand overall [2]. Notwithstanding the trend toward decarbonizing global energy systems, new carbon-intensive energy geographies are also

emerging. Particularly with the decline of “king coal” in China [3–4], new cross-scalar relations around the extraction, trade, and consumption of coal are being forged in the Global South, even as coal seems to be heading downhill in the Global North [5–6]. Similarly, although the establishment of *Powering Past Coal Alliance* in COP23, where more than a dozen OECD countries and other developing nations pledged coal phase-out, is promising, the fact that these countries barely account for 3% of global coal consumption is telling [7]. Then, the future of coal in the global energy mix will very likely be determined by extraction and consumption in the Global South coming attached with increasing locked-in emissions due to replacing old coal-fired power plants (CFPPs) in developed countries by new CFPPs in developing countries.

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Thus, despite the premature predictions on coal's endgame, the future trajectory of global coal markets seems to be 'moving East' albeit in a weak manner [8–9]. This future will be further shaped by the emerging trade relationships that are embedded in geopolitical and economic interests in South-South axes [10]. Notably, such axes include countries like India, South Africa, Colombia, Vietnam and Turkey, all of which have increased their coal trade in recent years [3,11].

In this paper, we specifically explore the imminent energy (in)justices through an empirical focus on the multiscale relations between environmental conflicts and anti-coal movements in new geographies of coal. Subsequently, we call into question the reproduction of multiple levels of socio-environmental injustices related to the interconnectedness of extraction and consumption in these new geographies. By analytically mobilizing 'energyscapes', as complex spatial and temporal combinations of supply, demand, and imposed infrastructures within connected landscapes [12], we focus on two developing economies with distinct yet interconnected characteristics: Colombia and Turkey. Examining the emerging geographies of coal in-and-between Colombia and Turkey, we present a concrete example through which to understand energyscapes that interconnect on many levels, including through South-South development cooperation [13], in such a way as to obscure emergent socio-ecological inequalities.

In what follows, we present the Colombian and Turkish cases as they operate at different layers (the market, the physical, and the socio-environmental) and at multiple scales. Section 2 briefly revisits the emerging literature on energy justice and energy geographies. Then, in section 3, we present our double case study methodology. Section 4, explains the dynamics of the new geographies of coal across South-South cooperation, pro-coal policies and energyscapes in both countries Colombia and Turkey. In section 5, we analyze the interaction of the multiple layers of this South-South coal chain and discuss the reproduction of energyscapes in both countries. Finally, we conclude by offering some insights into the democratization of energy on both the supply and the demand side.

2. Seeking justice in new energy geographies

Exploring justice in the area of energy requires attention to the distributional, recognition, and procedural dimensions of energy decisions [14]. However, this in itself is not enough to capture the interconnectedness of energy injustices, which are often contested at the local level but have much wider implications [15]. Seeking energy justice across multiple territorial and locational disparities require as much of a spatial focus on demand side as well as the supply side [16]. Alternative approaches in tune with work in the field of political ecology emphasize the distributed character of energy decisions and how they reproduce power and shape broader political and societal outcomes [17]. Challenging such power also implies challenging different forms of societal domination over energy decisions via 'disruptive' changes in social, cultural, political, and economic spheres [18].

Energy justice, by its very definition, pays attention to the scale of the problem and to geographies of responsibility. As Jenkins et al. [19] demonstrate, energy justice is based on a powerful normative and analytical grounding that builds bridges between John Rawls' (distribution, procedure) and Nancy Fraser's (recognition) work on operationalizing justice over the entire lifecycle of energy. It provides us both with a normative and evaluative/analytical tool to mobilize in answering questions on "where, when, why and who is implicated in developing energy solutions, for both production and consumption" [19:2]. Operationalizing this notion, Sovacool [20] charts a ten-point conceptual framework encompassing availability, affordability, due process, transparency and accountability, sustainability, intragenerational equity, intergenerational equity, responsibility, resistance, and intersectionality. A key issue running

through all these dimensions is the importance of cross-scalar justice¹, particularly given the interconnected nature of supply and demand patterns in energy trade [21]. Given this interconnectedness, a focus on multiscale energy justice requires diverse expertise on spaces and values as well as respect for multiple epistemologies, both formal and non-formal [15]. Consequently, interconnected energy geographies are central to understanding and addressing existing energy justice dilemmas in which the global and national levels are the principal circuits [22]. Nevertheless, most political actions relating to energy, including resistance to climate and environmental injustice, take place at the local and/or national level [23]. That said, the recent research on 'new geographies of energy' [24–25] shows changing landscapes in the production and consumption of energy by combining the perspective of globalization processes operating at multiple scales by also taking into consideration the impacts of global environmental changes and responses to them [12,26]. Overall, it is useful to address the matter of energy justice within the framework of interconnected landscapes, since this helps draw attention both to the political economy of energy investments and to "the interaction of natural, technical, and cultural phenomena" in spatially and temporally connected geographical settings [27]. In line with this, we believe that rethinking extraction and consumption as deeply interwoven practices through uneven socio-environmental interactions across a variety of scales and new geographies is necessary [23].

In this article, we argue that a focus on the notion of 'energyscapes' as fluid and irregular yet connected socio-political landscapes providing connectivity across grievances and environmental struggles [28] can help to better depict relations that exist beyond the commodity chain. Our approach here is one that treats energyscapes as multiform, connected and relational landscapes [29], encompassing social, spatial, material and discursive relations which shape and are shaped by production, transportation and consumption of energy [30]. These energyscapes are based in the notion of scapes as "the inter-coupled nature and dynamics of social-ecological-technological systems, the socio-natural changes and associated power relations" [31]. Consequently, they help us shed light on power and politics in energy relations not only at the geopolitical scale (as in typical North-South analysis) but also in "micro-politics and local scales of development on the ground" [32]. Yet we further assert that energyscapes, like carbon-scapes [33], not only refer to uneven physical or material conditions characterized by "path-dependencies and ruptures" [32:6], but also create continuums of institutional political struggles against the undemocratic appropriation of social, cultural, and material spheres, thereby creating cross-scalar assemblages. These fragmented struggles are progressively connected through translocal climate justice solidarities [34] that act from, on, and in contested spaces, eventually constructing new spaces [35].

Both the Paris Agreement and tireless push from the global climate justice movement seems to have created a momentum to further document and analyze the forces driving coal production and consumption, including an attention to the global power structures that shape coal-related conflicts [36–37]. Climate change, with coal being its archenemy, becomes a violation of the basic human rights, not only because of the unevenness of climate impacts and the lack of compensation for loss and damage but also because it involves other forms of injustices such as a lack of recognition and participation in political decision-making [38–39]. Climate justice movements focus increasingly on keeping fossil fuels in the ground.² We believe, such actions generate a pressing need to further document and understand the

¹ Within the scope of this article, we refer to cross-scalar justice as justice for humans and non-humans along the commodity chain across space and time.

² As proposed since 1997 by Ogonization and Yasunization movements [40] and more recently by the global grassroots climate campaign <https://350.org/> and by Naomi Klein with her notion of "Blockadia" [41].

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